

WHAT IS CLAIMED IS:

1. A DNS data model for relating DNS objects of a computer network to other DNS objects, and for expressing the software objects of a computer network in a form accessible by other network components, comprising:

5 DNS domains entities that represent DNS domains of devices connected to a computer network; and

DNS hosts entities that represent various DNS hosts connected to the computer network.

2. The DNS data model of Claim 1, wherein said DNS domains entities 10 are related to various entities representing DNS permissions, and types.

3. The DNS data model of Claim 2, wherein said various entities representing DNS permissions and types are selected from the group consisting of DNS ACLs entities, DNS ACL entries entities, DNS allow transfers entities, DNS allow queries entities, DNS domain types entities, DNS domain masters, and DNS 15 master IPs entities.

4. The DNS data model of Claim 1, wherein said DNS domains entities represent the DNS domains of one or more DNS hosts represented by said DNS hosts entities.

5. A DNS data model for relating DNS entities of a computer network to other DNS entities, and for expressing DNS entities of a computer network in a form accessible by other network components, comprising:

DNS domains entities; and

5 DNS hosts entities;

wherein said DNS domains entities represent various DNS domains to be used on a computer network; and

wherein said DNS hosts entities represent various DNS hosts connected to the network with which the DNS domains represented by the DNS domains

10 entities are associated.

6. A computer-readable set of instructions residing on a computer-readable medium that produces a DNS data model comprising:

DNS domains entities; and

DNS hosts entities;

15 wherein said DNS domains entities represent various DNS domains to be used on a computer network; and

wherein said DNS hosts entities represent various DNS hosts connected to the network with which the DNS domains represented by the DNS domains entities are associated.

2016 RELEASE UNDER E.O. 14176

7. A DNS data model for relating DNS entities of a computer network to other DNC entities of the computer network, and for expressing the DNS entities in a form accessible by other network components, comprising:

- a plurality of devices entities;
- 5 a plurality of DNS hosts entities;
- a plurality of DNS host types entities;
- a plurality of DNS ACLs entities;
- a plurality of DNS ACL entries entities;
- a plurality of DNS allow transfers entities;
- 10 a plurality of DNS domain types entities;
- a plurality of DNS domains entities;
- a plurality of DNS allow queries;
- a plurality of DNS domain masters entities; and
- a plurality of DNS master IPs.

15 8. The data model of Claim 7, further comprising a plurality of DNS configuration entities.

9. The data model of Claim 7, wherein said DNS hosts entities represent DNS host devices, and wherein said DNS hosts entities relate to:
said DNS host types entities by a many-to-one relationship;

09766439.072604
said DNS domains entities by a many-to-one relationship; and
a plurality of configuration entities by an optional one-to-many
relationship.

10. The data model of Claim 7, wherein said DNS host types entities
5 represent allowed DNS host types, and wherein said DNS host types entities relate
to said DNS hosts entities in a one-to-many relationship.

11. The data model of Claim 7, wherein said DNS ACLs entities represent
ACLS associated with specific DNS names, and wherein said DNS ACLs entities
relate to:

10 said DNS ACL entries entities by a one-to-many relationship;
said DNS allow transfers entities by a one-to-many relationship; and
said DNS allow queries entities by a one-to-many relationship.

12. The data model of Claim 7, wherein said DNS ACL entries entities
relate to said DNS ACLs entities by a many-to-one relationship.

15 13. The data model of Claim 7, wherein said DNS allow transfers entities
relate to:
said DNS ACLs entities by a many-to-one relationship; and

00076676.12/2019
said DNS domains entities by a many-to-one relationship.

14. The data model of Claim 7, wherein said DNS domain types entities
represent the allowed types of DNS names for the network, and wherein said DNS
domain types entities relate to said DNS domains entities by a one-to-many
5 relationship.

15. The data model of Claim 7, wherein said DNS domains entities
represent the various DNS domains of the network, and wherein said DNS
domains entities relate to:

10 said DNS hosts entities by a one-to-many relationship;
said DNS allow transfers entities by a one-to-many relationship;
said DNS allow queries entities by a one-to-many relationship;
said DNS domain types entities by a many-to-one relationship;
said DNS domain masters entities by a many-to-one relationship; and
a plurality of network entities by an optional many-to-one relationship;.

15 16. The data model of Claim 7, wherein said DNS allow queries entities
represent specific DNS queries allowed on the network, and wherein said DNS
allow queries entities relate to:

5 said DNS domains entities by a many-to-one relationship; and
said DNS ACLs entities by a many-to-one relationship.

17. The data model of Claim 7, wherein said DNS domain masters entities
relate DNS domains represented by said DNS domains entities and DNS master
5 IPs represented by DNS master IPs entities by way of a one-to-many relationship
with said DNS domains entities and a many-to-one relationship with said DNS
master IPs entities.

18. The data model of Claim 7, wherein said DNS master IPs entities
relate to DNS master IP addresses of the network, and relate to said DNS domain
10 masters entities by a one-to-many relationship.